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# Computer Vision Syndrome

& its role in your practice

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## ABOUT ME

- Born & Raised in Kansas
- Graduated from KU -- Rock Chalk!
- Graduated from Southern College of Optometry
- Completed Residency in Pediatrics & Vision Rehab
- Own private practice with my husband in LVN and KC metro

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## Housekeeping

I have no financial interests in any of the products I may mention during this presentation.

If you have questions, please email me.... [AReddell@FEClv.com](mailto:AReddell@FEClv.com)

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### Facts from the AOA

- 83% of children use an electronic device for 3 or more hours per day.
- 63% of parents report that their children use a computer or tablet to study online or do homework.
- More than 80% of people report irritated or tired eyes after using electronic devices for a long period of time.

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## Computer Vision Syndrome

### Signs/Symptoms

- Eyestrain
- Headaches
- Blurred Vision
- Dry Eyes
- Neck & Shoulder Pain

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## Computer Vision Syndrome

**Causes**

- Poor Lighting
- Glare on the Computer Screen
- Improper Viewing Distances
- Poor Seating Posture
- Uncorrected Vision Problems
- Combination of These Factors

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## The Myopia Epidemic

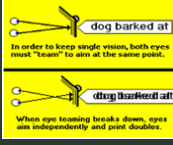
- In the 1970s, 25% of Americans from 12 to 54 were myopic.
- By 2000, 41% were myopic.
- In South Korea, 91% of 19-year-olds were myopic in 2010.
- No longer "stabilize in your 20s"

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## Binocular Vision Disorders

**Convergence Excess**

- Eyes over converging at near
- Headaches

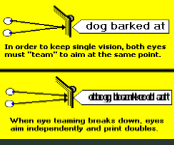


In order to keep single vision, both eyes must "strain" to aim at the same point.

When eye teaming breaks down, eyes aim independently and print doubles.

**Convergence Insufficiency**

- Eyes under converging at near
- Tired eyes, falling asleep at the computer
- Double vision



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## Convergence Disorders

The consumption of soft drinks by American youth is increasing. National dietary surveys show that carbonated soft drink consumption more than doubled in youths aged 6 to 17 from about 5 ounces per day in 1977-78 to 12 ounces in 1994-98, the most recent years for which national data is available. Adolescent boys' soft drink consumption more than tripled during those years.

There are at least two negative results to this soft drink explosion. First, the use of soft drinks is likely related to the rise in childhood obesity. A variety of studies suggest that we don't eat fewer calories from other sources when we increase calories from beverages. If a child drinks 9 to 10 ounces of a soft drink, that's equivalent to almost 120 calories.

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## Binocular Vision Disorders

**Accommodative Spasm**

- Headaches
- Blurred vision
  - Particularly on the drive home from work
- More at distance

**Accommodative Insufficiency**

- Blurred vision
  - More at near
- Early presbyopia

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## Accommodative Disorders

Failing to clean off your desk before lunch not only raises the risk of salad dressing spilling onto your work, but it could also increase your chances of getting sick. A new report shows that close to half of Americans don't clean their desks before eating at them, and a third don't wash their hands, which may foster the spread of infectious diseases like colds and flu.


Due to a shortage of the flu vaccine this year, health officials have urged the public to take measures to reduce their risk, and researchers say improving at-work hygiene and hand washing habits could have a major impact in reducing sick days. "Desks, phones, door knobs, conference tables, fax machines and other common workplace areas can be breeding grounds for bacteria-spreading germs," says Brian Sansoni, spokesman for the Soap and Detergent Association, in a news release.

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## Dry Eye Syndrome




**Blink Rate**  
22 blinks per minute when relaxed  
7-10 blinks per minute on a computer screen





**Treatment**  
Artificial tears by the computer  
Restasis/Xiidra  
Vision Breaks  
Remove CLs for work  
Consciously blink more often

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## Visual Hygiene/ Ergonomics

 **20/20/20 Rule**  
Every 20 minutes take 20 seconds to look 20 feet away

 **Location of Computer Screen**  
Want computer to be 20-28" away from eyes. The center of the screen should be 15-20 degrees (4-5°) below your eye level.

 **Reference Materials**  
Should be located above keyboard and below monitor

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## Visual Hygiene/ Ergonomics

### Lighting

- Try to eliminate exterior lighting
- Position computer so windows/lighting from the side...not in front or behind
- If possible, turn off the overhead fluorescent lights in your office and use floor lamps that provide indirect incandescent or halogen lighting instead.

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## Visual Hygiene/ Ergonomics

- Anti-Glare Screens
- Seating Position
  - Feet should be flat on the floor
  - If arm rests then position where can rest when typing
  - Wrists should not rest on the keyboard
- Blinking
- Outdoor time

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## Glasses Correction

**Lens Designs**


- Single vision computer glasses
- Computer/near lined bifocal
- Computer/near progressive
- Standard distance/intermed/near progressive


**Lens Treatments**


- Anti-reflective treatment
- Tint
- Blue Blocker

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## Computer Use & Contact Lenses

 Artificial tears while wearing CLs

 Consider computer glasses (plus prescription) with Anti-Reflective treatment over CLs

 Consider more frequent replacement schedule

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Questions?



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